Alabama Public Service Commission
Responses
To the Department of Energy's
Economic Dispatch Survey

1. **What are the procedures now used in your region for economic dispatch? Who is performing the dispatch (a utility, an ISO or RTO, or other) and over how large an area (geographic scope, MW load, MW generation resources, number of retail customers within the dispatch area)**?

The Alabama PSC regulates one electric utility – Alabama Power Company. This is one of the five operating companies (plus Southern Power Company) that is part of the Southern Company System of 43,000MW, 4 million customers, and 120,000 square miles in 4 states. The Southern Company performs economic dispatch for all generating resources of the operating companies and Southern Power Company.

The Southern Company uses a day-ahead unit commitment plan, in combination with real-time economic dispatch, to execute the optimal output of each resource based on the marginal costs of each resource available.

The types of generation are base, intermediate, peaking, co-generation and purchased power. The fuel mix includes nuclear, coal, hydro, natural gas, pumped-storage hydro, oil, and purchased power agreements.

2. **Is the Act's definition of economic dispatch appropriate? Over what geographic scale or area should economic dispatch be practiced**? **Besides cost and reliability, are there any other factors or considerations that should be considered in economic dispatch, and why?**

The definition is appropriate, although it should refer to "real-time" operation of the system. The optimal size depends on so many factors, that the costs and benefits would have to be carefully balanced. As a result, no generalized conclusions can be made regarding an optimal (or minimal) size or geographic area.

State policies and goals should be an important consideration. The development of generation has traditionally been made at the state level, taking into account local concerns over fuel diversity, emissions, renewable usage, weather, and economic development, among other concerns.

3. How do economic dispatch procedures differ for different classes of generation,

including utility-owned versus non-utility generation? Do actual operational practices differ from the formal procedures required under tariff or federal or state rules, or from the economic dispatch definition above? If there is a difference, please indicate what the difference is, how often this occurs, and its impacts upon non-utility generation and upon retail electricity users. If you have specific analyses or studies that document your position, please provide them.

Southern's nuclear facilities are considered must-run and hydro is generally used for peak shaving. All other generating resources are dispatched by the economic dispatch procedures in Question No. 1. Purchases from non-utility generators are included in the commitment plans and then put in the economic dispatch as a fixed block schedule. Non-utility generators normally take transmission service from Southern and schedule the delivery via Southern's OATT.

4. What changes in economic dispatch procedures would lead to more non-utility generator dispatch? If you think that changes are needed to current economic dispatch procedures in your area to better enable economic dispatch participation by non-utility generators, please explain the changes you recommend.

By definition, economic dispatch already takes into account the various cost components, as well as other factors, in order to optimize available generation resources. Therefore, changes to the process that may allow for more non-utility generator dispatch would most likely increase cost to the customers.

5. If economic dispatch causes greater dispatch and use of non-utility generation, what effects might this have – on the grid, on the mix of energy and capacity available to retail customers, to energy prices and costs, to environmental emissions, or other impacts? How would this affect retail customers in particular states or nationwide? If you have specific analyses to support your position, please provide them to us.

Southern Company already utilizes economic dispatch procedures and, as a result, has been able to displace some higher cost generation.

6. Could there be any implications for grid reliability – positive or negative – from greater use of economic dispatch? If so, how should economic dispatch be modified or enhanced to protect reliability?

Economic dispatch, in and of itself, has no effect on reliability. In fact, under economic dispatch, adjustments are made as needed to maintain reliability.